

CLAIMS

1 1. (Currently Amended) A process of preparing ortho substituted phenylamines comprising
2 contacting phenylhydroxylamine, optionally substituted with at least one inert substituent,
3 with a nucleophilic reagent in the presence of a manganese oxide at a temperature between
4 about 10° C and about 170° C and a pressure from subatmospheric to superatmospheric such
5 that an ortho substituted phenylamine, optionally correspondingly substituted with at least
6 one inert substituent, is ~~predominantly~~ formed.

1 2. (Original) The process of claim 1 wherein the phenylhydroxylamine is unsubstituted
2 phenylhydroxylamine.

1 3. (Original) The process of claim 1 wherein the phenylhydroxylamine is substituted with at
2 least one member selected from the group consisting of C₁-C₁₀ alkyl, C₆-C₁₀ aryl, and C₆-C₁₀
3 alkaryl moieties.

1 4. (Original) The process of claim 1 wherein the nucleophilic reagent is selected from the
2 group consisting of ammonia, water, C₁-C₂₀ aliphatic alcohols, phenols, halides, and amines
3 having the formula R'₂NH wherein each R' may independently be a hydrogen, C₁-C₂₀
4 aliphatic, C₄-C₈ alicyclic, or C₆-C₁₅ aryl or alkaryl moiety.

1 5. (Original) The process of claim 1 wherein the nucleophilic reagent is an amine represented
2 by the formula R'₂NH wherein each R' is independently a hydrogen, C₁-C₅ alkyl, or C₆-C₁₀
3 phenyl or alkyl-substituted phenyl moiety.

1 6. (Original) The process of claim 5 wherein the nucleophilic reagent is aniline.

1 7. (Original) The process of claim 1 wherein the molar ratio of nucleophilic reagent to
2 phenylhydroxylamine ranges from about 2 to about 100.

1 8. (Currently Amended) A process for preparing ortho substituted phenylamines comprising

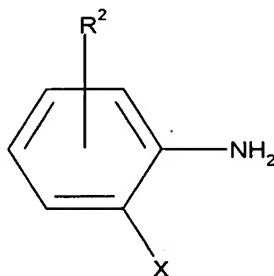
contracting phenylhydroxylamine, optionally substituted with at least one inert substituent, with a nucleophilic reagent, the molar ratio of nucleophilic reagent to phenylhydroxylamine ranging from about 2 to about 100, the contacting of the phenylhydroxylamine and nucleophilic reagent being conducted in the absence of oxygen and in the presence of a catalyst that is a cryptomelane-type manganese oxide Octahedral Molecular Sieve, with a composition of $\text{KMn}_8\text{O}_{16} \cdot n\text{H}_2\text{O}$ ($n = 0.5-10$) in which said molecular sieve comprises MnO_6 octahedral structural units that are edge and corner shared to form a 4.6×4.6 tunnels as a result of 2×2 arrangement of octahedra, in which the potassium ions are present in the tunnels with a small amount of water and said potassium ions are ion-exchanged by H^+ ions using nitric acid to obtain the acidic form of said sieve at temperatures ranging from about 70°C to about 120°C , whereby an optionally-substituted ortho substituted phenylamine is formed in amounts equal to or greater than any concurrently formed para isomer.

9. (Original) The process of claim 8 wherein the phenylhydroxylamine is unsubstituted phenylhydroxylamine.

10. (Original) The process of claim 8 wherein the nucleophilic reagent is selected from the group consisting of ammonia, water, $\text{C}_1\text{-C}_{20}$ aliphatic alcohols, phenols, halides, and amines having the formula $\text{R}'_2\text{NH}$ wherein each R' may independently be a hydrogen, $\text{C}_1\text{-C}_{20}$ aliphatic, $\text{C}_4\text{-C}_8$ alicyclic, or $\text{C}_6\text{-C}_{15}$ aryl or alkaryl moiety.

11. (Original) The process of claim 8 wherein the nucleophilic reagent is aniline.

12. (Original) The process of claim 8 wherein the ortho substituted phenylamine is represented by the formula:



9 wherein R² is hydrogen or at least one C₁-C₁₀ alkyl moiety, and X is selected from hydroxy,
10 halo, C₁-C₂₀ alkoxy, phenoxy, and amino of the formula -NR'₂ wherein each R' is
11 independently a C₁-C₂₀ aliphatic, C₄-C₈ alicyclic, or C₆-C₁₅ aryl or alkaryl moiety.

1 13. (Original) The process of claim 12 wherein X is amino and the ortho substituted
2 phenylamine is a o-phenylenediamine.

1 14. (Currently Amended) The process of claim 13 wherein ~~the ortho~~the ortho substituted
2 phenylamine is o-aminodiphenylamine represented by the formula:

